THE MASSACHUSETTS BOARD OF HIGHER EDUCATION
MASSACHUSETTS COMMUNITY COLLEGE
CLASSIFICATION SPECIFICATION

CLASSIFICATION TITLE: PROGRAMMER
CLASSIFICATION NUMBER:

GENERAL DESCRIPTION OF DUTIES

Under general supervision, the purpose of the classification is to analyze existing systems and create/test new computer programs. Employees in this classification perform technical work. Classification is responsible for analyzing existing program/systems, assisting with the design/development of programs, compiling/testing programs, writing program documentation, and providing training and technical support for system users. Performs related work as directed.

SPECIFIC DUTIES AND RESPONSIBILITIES

EXAMPLES OF ESSENTIAL FUNCTIONS

The list of essential functions, as outlined herein, is intended to be representative of the tasks performed within this classification. It is not necessarily descriptive of any one position in the class. The omission of an essential function does not preclude management from assigning duties not listed herein if such functions are a logical assignment to the position.

Conducts system analysis (i.e.- analyzes existing program/systems for potential improvement or standardization; researches user problems and evaluates/defines problems; analyzes/discusses user requests; recommends alternative solutions; recommends program changes).

Assists conducting system design and development (i.e.- assists conducting general system design for selected alternative based on user requests; develops detailed computer programs based on specifications and guidelines provided; creates coding instructions; compiles, tests, and de-bugs programs).

Develops program documentation (i.e.- creates/updates program documentation for operations personnel and maintenance programmers; writes instructions and training manuals for users to run programs).

Provides technical support for users (i.e.- trains/assists users in computer/software operations; works with users to define problems; trains/instructs users in operation of new/modified applications).

Conducts technical work associated with computer operations (i.e.- sets up, installs, and upgrades hardware/software for users; troubleshoots system problems; assists in maintaining, repairing, and modifying systems; maintains user profiles and menu access; sets up data used to track progress; performs database file verification following system crashes; oversees creation of users on minicomputer and network systems; checks error logs on network and minicomputer).

Performs administrative tasks associated with department activities (i.e.- assists with product research, product evaluation, and vendor selection; provides purchasing input to users on hardware/software requirements; initiates orders for computer equipment, parts, tools, or supplies; plans schedule for Year 2000 conversion of data; prepares system documentation, job write-ups, training manuals, flow charts, diagrams, purchase orders, reports, forms, newsletters, and general correspondence; receives or refers to logs,

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programs, job write-ups, grade scanners, student records, edit reports, enrollment letters, flow charts, blueprints, newsletters, hardware/software documentation, manuals, and reference materials).

Operates computers, scanners, modems, networking equipment, and general office equipment; utilizes computer operating systems, word processing, spreadsheet, database, desktop publishing, networking, programming, utilities, presentations, graphics, internet, e-mail, or other software programs.

Interacts with various agencies/individuals (i.e.- attends meetings and serves on committees; conducts tours of campus data center; communicates with supervisor, employees, other departments, students, faculty members, consultants, vendors, the public, outside agencies, and other individuals to coordinate activities, review status of work, exchange information, or resolve problems).

Maintains professional knowledge in applicable areas (i.e.- maintains a working knowledge of assigned area; researches new technologies, products, methods, trends, and advances in the profession; reads professional literature; attends conferences, workshops, and training sessions).

MARGINAL FUNCTIONS

While the following tasks are necessary for the work of the unit, they are not an essential part of the purpose of this position and may also be performed by other unit members.

Performs miscellaneous tasks (i.e.- drives between campuses; sets up terminals for late registration; assists in scheduling/advising students during late registration; replenishes paper in printer; bursts and distributes computer reports; verifies grades/reports; scans data; opens/closes offices, locking/unlocking doors and turning alarms on/off).

Performs related duties as directed.

MINIMUM TRAINING AND EXPERIENCE

Bachelor's degree in Computer Science, Computer Programming, Information Technology, or closely related field; with three (3) years experience and/or training that includes computer programming, computer operating systems, hardware/software installation and troubleshooting, and general computer operations; or an equivalent combination of education, training, and experience.

SPECIAL REQUIREMENTS

Must possess and maintain a valid Massachusetts driver's license.

PERFORMANCE APTITUDES

Data Utilization: Requires the ability to evaluate, audit, deduce, and/or assess data using established criteria. Includes exercising discretion in determining actual or probable consequences and in referencing such evaluation to identify and select alternatives.

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Human Interaction: Requires the ability to apply principles of persuasion and/or influence over others in coordinating activities of a project, program, or designated area of responsibility.

Equipment, Machinery, Tools, and Materials Utilization: Requires the ability to operate and control the actions of equipment, machinery, tools and/or materials requiring complex and rapid adjustments.

Verbal Aptitude: Requires the ability to utilize a wide variety of reference, descriptive, advisory and/or design data and information.

Mathematical Aptitude: Requires the ability to perform addition, subtraction, multiplication and division; ability to calculate decimals and percentages; may include ability to perform mathematical operations involving basic algebraic principles and formulas, and basic geometric principles and calculations.

Functional Reasoning: Requires the ability to apply principles of influence systems, such as motivation, incentive, and leadership, and to exercise independent judgment to apply facts and principles for developing approaches and techniques to resolve problems.

Situational Reasoning: Requires the ability to exercise judgment, decisiveness and creativity in situations involving the evaluation of information against sensory, judgmental, or subjective criteria, as opposed to that which is clearly measurable or verifiable.

ADA COMPLIANCE

Physical Ability: Tasks require the ability to exert very moderate physical effort in light work, typically involving some combination of stooping, kneeling, crouching and crawling, and which may involve some lifting, carrying, pushing and/or pulling of objects and materials of moderate weight.

Sensory Requirements: Some tasks require the ability to perceive and discriminate colors or shades of colors, sounds, and visual cues or signals. Some tasks require the ability to communicate orally.

Environmental Factors: Essential functions are regularly performed without exposure to adverse environmental conditions.

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